

consisting of Val at position 4, Asp at position 19, Ser at position 53, Lys at position 57, Ala at position 74, Asp at position 79, Arg at position 84, Pro at position 91, Asn at position 109, Lys at position 116, Val at position 119, Ala at position 132, Thr at position 137, Ile at position 139, Ser at position 140, Tyr at position 143, His at position 153, Leu at position 156, Arg at position 159, Lys at position 161, Lys at position 177, Gly at position 230, Ser at position 235, and His at position 236.

29. (amended) The polypeptide according to claim 28 that comprises SCR selected from the group consisting of SCR 1, 2, 3 and 4 of LHR-A or SCR 1, 2 and 3 of LHR-A.

42. (amended) A soluble derivative of a soluble polypeptide (SEQ ID NO: 59), wherein said soluble derivative comprises in sequence three short consensus repeats (SCR) of long homologous repeat A (LHR-A) selected from the group consisting of SCR 1, 2, 3, and 4, and including at least SCR3, wherein at least one of the native amino acids of the SCR (SEQ ID NO: 59) is substituted, wherein the substitution is selected from the group consisting of Val at position 4, Asp at position 19, Ser at position 53, Lys at position 57, Ala at position 74, Asp at position 79, Arg at position 84, Pro at position 91, Asn at position 109, Lys at position 116, Val at position 119, Ala at position 132, Thr at position 137, Ile at position 139, Ser at position 140, Tyr at position 143, His at position 153, Leu at position 156, Arg at position 159, Lys at position 161, Lys at position 177, Gly at position 230, Ser at position 235, His at position 236,

wherein said soluble polypeptide comprises at least two heterologous membrane binding elements with low membrane affinity covalently associated with the polypeptide, wherein the elements are capable of interacting independently and with thermodynamic additivity with components of cellular membranes exposed to extracellular fluids,

wherein the membrane binding elements have an affinity with a dissociation constant of between at least about 1 μ M and 1mM.

43. (amended) The soluble derivative of polypeptide according to claim 42, comprising two to eight membrane binding elements selected from the group consisting of fatty acid derivatives, ligands of internal membrane proteins, sequences derived from the complementarity-determining region of monoclonal antibodies raised against epitopes of membrane proteins, and membrane binding sequences identified through screening of random chemical libraries.

49. (amended) A process for preparing a soluble derivative of a soluble polypeptide (SEQ ID NO: 59), wherein said soluble derivative comprises in sequence three short consensus repeats (SCR) of long homologous repeat A (LHR-A) selected from the group consisting of SCR 1, 2, 3, and 4, and including at least SCR3, wherein at least one of the native amino acids of the SCR (SEQ ID NO: 59) is substituted, wherein the substitution is selected from the group consisting of Val at position 4, Asp at position 19, Ser at position 53, Lys at position 57, Ala at position 74, Asp at position 79, Arg at position 84, Pro at position 91, Asn at position 109, Lys at position 116, Val at position 119, Ala at position 132, Thr at position 137, Ile at position 139, Ser at position 140, Tyr at position 143, His at position 153, Leu at position 156, Arg at position 159, Lys at position 161, Lys at position 177, Gly at position 230, Ser at position 235, His at position 236, comprising

expressing DNA encoding the polypeptide portion of said derivative in a recombinant host cell and recovering the product and thereafter post translationally modifying the polypeptide to chemically introduce membrane binding elements.

50. (amended) A pharmaceutical composition comprising (A) a therapeutically effective amount of a soluble polypeptide comprising in sequence three short consensus repeats (SCR) of long homologous repeat A (LHR-A) selected from the group consisting of SCR 1, 2, 3, and 4, and including at least SCR3, wherein at least one of the native amino acids of the SCR (SEQ ID NO: 59) is substituted, wherein the substitution is selected from the group consisting of Val at position 4, Asp at position 19, Ser at position 53, Lys at position 57, Ala at position 74, Asp at position 79, Arg at position 84, Pro at position 91, Asn at position 109, Lys at position 116, Val at position 119, Ala at position 132, Thr at position 137, Ile at position 139, Ser at

position 140, Tyr at position 143, His at position 153, Leu at position 156, Arg at position 159, Lys at position 161, Lys at position 177, Gly at position 230, Ser at position 235, His at position 236, and (B) a pharmaceutically acceptable carrier or excipient.